

REMARKS

In the Office Action, claims 1-11 and 14-22 were rejected. By the present Response, claims 1, 14 and 22 are amended. Upon entry of the amendments, claims 1-11 and 14-22 will be pending in the present patent application. Reconsideration and allowance of all pending claims are requested.

Rejections Under 35 U.S.C. § 102

The Office Action summarizes claims 1-11, 14-15 and 18-22 as rejected under 35 U.S.C. §102(b) as being anticipated by Oppitz (U.S. Patent No. 4,616,125).

By the present response independent claims 1, 14 and 22 are amended. Independent claims 1, 14 and 22 and the claims depending therefrom are believed to be patentable for the reasons summarized below.

Claim 1

Claim 1 has been amended to include the recitations regarding the conductive composite being a thermoformable component. Amended claim 1 recites an apparatus with a self heating feature comprising at least one conductive component of the apparatus comprising conductive composite, wherein the at least one conductive component is adapted to couple with a source of electricity, and wherein the at least one conductive component heats up on passage of electricity. The conductive composite is a thermoformable component comprises an organic polymer and a nanosized conductive filler. The recitations of claim 1 are fully supported in the specification. *See, e.g.*, Paragraphs [00118], and elsewhere.

Claim 14

Claim 14 has been similarly amended to include the recitations regarding the conductive composite being a thermoformable component. Amended claim 14 recites a method for providing heating in an apparatus. The method includes heating at least one

conductive component of the apparatus, wherein the heating is done by passing an electric current through the conductive component, and wherein the at least one conductive component comprises a conductive composite. Further, the conductive composite is a thermoformable component comprising: an organic polymer and a nanosized conductive filler.

Claim 22

Claim 22 has been similarly amended to include the recitations regarding the conductive composite being a thermoformable component. Amended claim 22 recites an apparatus with a self heating feature comprising at least one conductive component of the apparatus comprising conductive composite, wherein the at least one conductive component is adapted to couple with a source of electricity, and wherein the at least one conductive component heats up on passage of electricity. The conductive composite is a thermoformable component comprising an organic polymer, a nanosized conductive filler and carbon fibers or graphite.

As can be seen, claims 1, 14 and 22 recite, in a generally similar language, a self heating apparatus including a conductive composite that is thermoformable. Further, the thermoformable component includes an organic polymer, a nanosized conductive filler and/or carbon fibers or graphite.

The Examiner argued that Oppitz discloses an apparatus with a self heating feature comprising conductive composite, wherein the at least conductive composite is adapted to couple with a source of electricity. Further, the Examiner observed that in some embodiments Oppitz teaches that the conductive component comprises an insulating layer at least partially covering the conductive composite.

Applicants respectfully submit that Oppitz teaches a heating element that includes a resistance layer disposed between two planar electrodes. The resistance layer includes a

matrix of an electrically conductive synthetic resin material having a positive temperature coefficient of electrical resistance. A particulate thermally and electrically insulating filler material is dispersed throughout the synthetic resin material matrix. The heating element is installed in a manner such that the surface of a heat barrier plate rests on a floor structure, e.g. on a coarse concrete flooring.

Applicants respectfully submit that Oppitz does not teach the composite being a thermoformable. The present invention teaches the conductive composite having the nanosized filler material and provides advantages in terms of formability due to better melt flow (e.g. for injection molding). The ratio of either the nanosized conductive fillers and/or the carbon fibers to graphite is about 1:6 to about 1:80. The electrically conductive compositions are advantageously injection moldable and have melt viscosities of about 100 to about 600 Pascal-seconds (Pa-s).

Thus, the thermoformable component is injection moldable and can be formed into shapes suitable for various applications, including but not limited to appliances. For example, such component is adaptable to various environments such as domestic appliances, for example, refrigeration systems, air conditioners, dishwashers, washing machines, among others.

For example, in a refrigerator, various trays, shelves, compartments, and walls are examples of the "thermoformable component," that the recited invention may enable. Such components that are self heating, as discussed in the application, are different from the heating elements such as discussed in Oppitz, in which heat is generated in the element, and passed on to a body. It is noted here that by virtue of the present invention, instead of having a separate heating component heating a body, heat is generated within the body part self heating, eliminating the need for an additional heating component. Oppitz does not teach the conducting composite comprising a thermoformable component.

Applicants respectfully submit that a *prima facie* case of anticipation cannot be supported by Oppitz against claims 1, 14 and 22. Therefore, Applicants submit that independent claims 1, 14 and 22 and their dependent claims are allowable and respectfully request the Examiner to reconsider the rejection of the claims.

Dependent claims

Claims 2-11, 15, 18-21 depend from independent claims 1 and 14, respectively. Applicants respectfully submit that insomuch as independent claims 1 and 14 are allowable, claims 2-11, 15 and 18-21 are allowable at least by virtue of their dependence from an allowable base claim.

Rejections Under 35 U.S.C. § 103

The Office Action summarizes claims 16-17 as rejected under 35 U.S.C. §103(a) as being anticipated by Oppitz in view of Todt et al. (U.S. Patent No. 6,599,446). Claims 16-17 depend from independent claim 14.

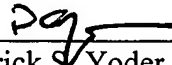
Applicants respectfully submit that insomuch as independent claim 14 is allowable, claims 16-17 are allowable at least by virtue of their dependence from an allowable base claim.

Conclusion

In view of the remarks and amendments set forth above, Applicants respectfully request allowance of the pending claims. If the Examiner believes that a telephonic interview will help speed this application toward issuance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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